

# Chapter 15

## Information Systems

### Planning in Web 2.0 Era: A New Model Approach

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#### **ABSTRACT**

*Since the early development in the 90's, organizations had been growing in a rapid way, becoming each more difficult to manage. Organization business cycle changed from 7 years in 1970-1980 to 12-18 months in the 90's, and is even shorter in our time. This addressed the organizations world to a new and complex reality. To be able to deal with this reality, organizations set a big pressure in information access and information turn out to be the most valuable organization asset. Nevertheless, this asset, the information object, has some main characteristics like, exists in larges quantities, has many different forms, is very volatile and it also must have confidentially, integrity and availability and all this together can be very hard to manage. It's clear that the management of this information reality is only possible with the adoption of information technologies and planning that adoption and implementation is a central need in order to get the correct solution for the organization ecosystem.*

#### **INTRODUCTION**

Organizations had been growing in an accelerated manner since the beginnings of 90's decade, becoming each more complex to manage. This growing, compressed the business life cycle and organizations development, and drives (and drives) to high needs in the information access and management.

In face of this central need, organizations have been defining information has their most valuable asset. But when information exists in a great amount, is very volatile and diverse makes fundamental the adoption of information technologies in its management.

This took to the evolution of information technologies according to organizational needs.

If in the beginning the use of technology could be a competitive advantage, due to high investment cost, functional complexity and the need to use a

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Table 1. Information system development periods - based on (Hsu, 1995)

|                   | Period                               | Characteristics  |
|-------------------|--------------------------------------|--|
| 60's              | Data processing (DP)                 | Stand alone computers, fare from users, cost reduction function  |
| 70's & 80's       | Information Systems Management (ISM) | Distributed processing, interconnected, business support, user oriented  |
| 80's & 90's       | Strategic information systems (SIS)  | Networked integrated systems, user functional and available, business strategic related, business development oriented |
| 20th/21st century | Information Security (IS)            | Dynamic management of all information flow, security oriented  |

large amount of human resources, today, with a small investment is possible to get technology with the same functionality of bigger systems.

This trivialization of technology, makes clear that, this demand to information access, only can be supported with the correct quality and efficiency, using the correct characterization of organization information systems (André Vasconcelos, 1999), been able to evaluate not only the acquiring and processing of information, as happened on the firsts years of information systems, but clearly point a parallel information systems path within the organization development, being able to at each time supply the correct and needed information.

Defining this relationship, where organization information needs are mapped into the adoption of correct information technology has been the main goal of information systems planning.

In order to have suitable technology, at each organization development moment, information systems planning models were developed. By this way it was created a benchmark for the organization characterization and consequent translation into technology. The development of these models has been associated to specific phases, characteristics and needs of organizations development and also aligned with the development of the information systems solutions and technology.

Table 1, illustrates the different phases of information systems development and their fundamental concerns also showing information systems planning challenges and the characteristics of expected needs and targets.

With a compressed life cycle, dynamic organizations face now, a deep change in how interactions are made with the elements that define its development.

Organizations suffered the first impact with the Internet arrival, known as World Wide Web and that can be defined as WEB 1.0, and its possibility to have availability of information in a new and innovative way. However, technology continued development allowed the potentiality grow of Internet and leaved to the development of new ways of information availability. In the last three years, this evolution is been centered in the WEB 2.0 (Reilly, 2005) paradigm . With this new paradigm, the information world migrates from a “*network is the computer*” to “*networked user*” vision.

This networked user, using technological ubiquitous tools and interacting in many different ways, produces networked centered knowledge according to some predetermined preferences and goals. So, is possible to see an accelerated growth of this kind of knowledge, and some examples like Facebook, Flickr or the more well known, YouTube can be pointed out.

Despite this, the full value of networked knowledge was present in the development of two primary Web 2.0 examples, the open-source software and Wikipedia, that in their form reflect the new way of organizational development and show the path to the collaborative ecosystem creation.

This ecosystem can be defined as “*unique combination of integrated “things” where information flows in order to promote maximization*”.

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